Solar – Calculate Costs:

(OR us http://homepower.com/resources/energy_master.cfm)

Factors

- Average KWH used by your home each month (use your electric bill)
- Peak sun hours for your location (see http://www.solar4power.com/solar-power-insolation-window.html, http://www.rockygrove.com/design/howmany.html, http://homepower.com/education/solar_map.cfm
- Quality of your solar 'window'
- Financial incentives, if any. (see www.dsireusa.org/)

Calculate Your Costs:

1. Daily output needed:
   Average Monthly Electricity Use_____KWH
   X 1,000 (convert KWH to Watt-Hours_____WH
   X % of Monthly Electrical Use from PV
   Divide by 30 days
   =Daily PV output needed _____

2. Minimum system size (in watts)
   Daily PV needed (from step 1) _____WH
   Divide by ave Peak Sun Hours Per Day=_____W
   Divide by .7 (70% efficiency factor
   = Minimum System Size_____W

3. Number of PV modules needed
   Minimum System Size (step 2) _____WH
   Divide by Wattage Rating of chosen Modules ____W
   =number of modules _____Modules

4. Size of System
   i. Modules required (from step 3, round up) ___Modules
   ii. X Wattage Rating (from Step 3) _____
   i. =system size (in Watts) _____W

5. System Cost
   System Size (step 4) _____W
   X System Cost Per Watt (see below) $_____
   - rebates and incentives $___
   = approximate System Cost $_____

   INSTALLED COSTS
   Less than 1,000 W - $10 to $12 or more per watt
   1,000 – 4,000 W: $8 – 10 per watt
   4,000 +: $6-8 per watt

Other Resources
Calculator for grid-tied system: http://rredc.nrel.gov/solar/codes_algs/PVWATTS/
Home Power Magazine: www.homepower.com